

PATENT

Attorney Docket: D0932-00457 (I-8882)

REMARKS

Reconsideration of this application is respectfully requested.

The Examiner is requested to call Applicants' attorney, Steven Koffs at 215-979-1250, prior to taking further action in this application, to expedite resolution of any remaining issues.

Claims 1, 2, 3, and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Qi (U.S. Patent No. 6,841,941), and claims 4-9 and 11-13 were rejected under 35 U.S.C. § 103 as being unpatentable over Qi in view of Luongo (U.S. Patent No. 6,391,958). Withdrawal of the rejections is respectfully requested.

Applicants incorporate by reference the arguments presented in the response filed October 19, 2005, and add the following remarks.

Claim 1 is amended to include a feature of claim 11, to reduce the issues for appeal. Therefore, entry of this amendment under 37 CFR § 1.116 is proper.

Amended Claim 1 requires:

- (a) molding a shiplap edge in a first duct board ..., the molded shiplap edge having a molded edge thickness; and
- (b) machining the molded shiplap edge with a cutter or grinder to a desired machined edge thickness that is less than the molded edge thickness.

The Action appears to consider molding to be a form of machining. To eliminate this issue, claim 1 is amended to include features of original claim 11, to require that the machining is done with a cutter or grinder. The discussion of molding in Qi neither discloses nor suggests machining with a cutter or grinder.

The Action admits on page 3 that, "The primary reference to Qi was discussed above. ... [T]he Examiner was unable to find express teachings of ... grinding its product ..."

Thus, Qi does not disclose the claimed step of, "machining the molded shiplap edge with a cutter or grinder to a desired machined edge thickness that is less than the molded edge thickness". The Action alleges that a grinding step is admitted on page 1, line 27 to page 2, line 2. However, the cited passage is part of Applicant's, "Summary of the Invention," and is not part of the "Background" section.

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Applicants most certainly do not admit that the Summary of the Invention is prior art. It is improper for the Patent and Trademark Office to select a feature from Applicant's disclosure and characterize it as "readily admitted." Although this error on the part of the Patent and Trademark Office may have been unintentional, it is nevertheless the clearest form of impermissible use of hindsight for the patent office to openly apply Applicant's disclosure in the Summary of the Invention as support for its characterization of the prior art.

Based on the Patent and Trademark Office's admission, the rejection of claims 1, 2, 3, and 10 as being anticipated must be withdrawn. M.P.E.P. § 2131 recites:

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH
EVERY ELEMENT OF THE CLAIM

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Qi does not disclose every element of claims 1, 2, 3 and 10, and thus cannot anticipate these claims. Withdrawal of the rejection of claims 1, 2, 3 and 10 under § 102 is respectfully requested.

Claims 4-9 and 11-13 were rejected under 35 U.S.C. § 103 as being unpatentable over Qi in view of Luongo (US 6,391,958). As noted above with respect to claims 1, 2, 3 and 10, Qi fails to disclose or suggest "machining the molded shiplap edge with a cutter or grinder to a desired machined edge thickness that is less than the molded edge thickness." Contrary to the allegations in the office action, Luongo fails to cure the deficiencies of Qi with respect to this feature.

The Action repeats the unfounded allegation that Luongo teaches grinding of a duct board product during its production. However, Luongo neither discloses nor suggests grinding a duct board product. Luongo only teaches grinding a gypsum ore. Luongo makes no mention whatsoever regarding a shiplap edge. Further, the only mention of duct in Luongo relates to supplying air through a duct during the **wallboard production** process (col. 17, lines 1-8; and col. 20, lines 34-63; and col. 22, lines 12-15 and 58-67). The phrase "duct board" never appears at all in Luongo. There is no mention or suggestion whatsoever in Luongo of a process for

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fabricating a duct board, or fabricating a duct of any kind. Thus, the statement of facts in the Action is incorrect.

Thus, to cure the deficiencies of Qi, the Action relies on Luongo, which fails to disclose or suggest a duct board, fails to disclose or suggest a shiplap edge, fails to disclose or suggest machining a molded surface of any kind, and fails to disclose or suggest use of a cutter or grinder to machine a molded shiplap edge. One of ordinary skill in the art at the time applicant's invention was made, who was familiar with Qi and Luongo would not have looked to Luongo to modify Qi's duct board shiplap edge, because Luongo has nothing to do with duct board, and Luongo has nothing to do with shiplap edges. Assuming that one of ordinary skill in the art at the time applicant's invention was made was motivated to reduce the cost of Qi's shiplap edges, there is simply nothing in Luongo that suggests use of a cutter or grinder to machine a molded shiplap edge as a method of cost reduction. Contrary to the allegations in the office action, there is nothing in Luongo that even suggests that grinding anything can be used to reduce costs.

M.P.E.P. § 2143.01 recites:

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. ... *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000).

In summary, without the use of impermissible hindsight gained from applicant's disclosure, one of ordinary skill in the art at the time applicant's invention was made, who was interested in reducing the cost of Qi's duct board shiplap edge, would never have looked to Luongo, which is unrelated to duct board, and unrelated to shiplap edges.

The Action alleges that it is notoriously well known to grind a duct board product. Assuming for purpose of argument that it was known to grind a duct board, there is no allegation that it is well known to machine a molded shiplap edge with a cutter or grinder. On the contrary, the Patent and Trademark Office has failed to identify any disclosure or suggestion in the prior art of a step of machining a molded shiplap edge with a cutter or grinder. The Action alleges that col. 7, lines 20-24 teach that grinding would have been motivated by a desire to cut production

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costs. The Office Action takes lines 20-24 out of context and reaches an incorrect conclusion.

The paragraph from lines 9-24 states:

First, the wallboard composition of the present invention enables a significant reduction of the amount of calcined gypsum required to produce the wallboard. This reduction in the amount of calcined gypsum stucco (through the use of perlite in the wallboard composition) in the method of the present invention expands the production capabilities of current wallboard manufacturing plants. Typically, the gypsum plants are limited in capacity production due to grinding of the gypsum ore or in calcination of the synthetic gypsum. Stretching the amount of gypsum required while reducing the energy and overall cost required greatly enhances the manufacturing production capabilities of the modified wallboard manufacturing facility of the instant invention.

Thus, Luongo teaches that reducing the amount of gypsum (through the use of perlite in the wallboard composition) lowers production costs. Luongo also teaches that grinding gypsum ore is disadvantageous, limits capacity, and increased production costs. To the extent that the cited passage states anything about grinding and cost reduction, it teaches away from grinding. According to Luongo, grinding is part of the problem, not part of the solution. One of ordinary skill in the art at the time applicants' invention was made would have been motivated to add perlite to the gypsum, and would have been dissuaded from grinding gypsum ore. Thus, Luongo teaches away from grinding gypsum ore and says nothing at all about fabricating duct board. To the extent that Luongo can be considered to say anything about grinding, Luongo teaches away from the invention.

The Examiner's argument that Applicant's invention lowers costs and therefore, "would have been obvious motivated by the desire to cut production costs," attempts to compensate for a lack of any teaching, motivation or suggestion of applicant's claimed combination in the prior art. Taking this argument to its logical conclusion, the only inventions that would be patentable are those that increase production costs. A prospective cost reduction cannot provide the motivation to modify the teachings of the prior art where, as here, the prior art taught that a feature (grinding) later included in applicant's claimed combination would have increased costs, and in any event is applied to a totally different process (gypsum ore extraction) than claimed by applicant.

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The argument in the office action fails, because Luongo fails to suggest, "machining the molded shiplap edge with a cutter or grinder," as required by claim 1, and thus fails to suggest any reduction in production cost from that feature. At most, Luongo only suggests that there is a way to cut production costs, but the solution proposed by Luongo has nothing to do with grinding generally, or with applicant's claimed invention in particular. Absent some teaching in the prior art that the specific features claimed by applicant would reduce production costs, a mere general desire to reduce costs fails to state a prima facie case of obviousness.

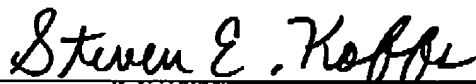
Further, one of ordinary skill in the art would not have looked to the teachings of Luongo to modify the teachings of Qi in any event. Qi is directed to a duct board material made of fiber glass. Luongo is directed to a wallboard product made of gypsum and perlite, with a paper covering. These materials have very different characteristics and applications, and one of ordinary skill in the art at the time applicant's invention was made would not have been motivated to look to the teachings of Luongo to modify the duct board of Qi. Therefore, a prima facie case of obviousness has not been established.

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Early notification to that effect is respectfully requested.

The Assistant Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this communication to deposit account 04-1679.

Respectfully submitted,

Dated: 2-28-06



Steven E. Koffs, Reg. No.: 37,163
Attorney For Applicants

DUANE MORRIS LLP
30 South 17th Street
Philadelphia, Pennsylvania 19103-4196
(215) 979-1250 (Telephone)
(215) 979-1020 (Fax)